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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/892,977	06/27/2001	Kirk D. Smith	WTI-2-CON	4764
22827	7590	07/29/2004		
DORITY & MANNING, P.A. POST OFFICE BOX 1449 GREENVILLE, SC 29602-1449			EXAMINER JUSKA, CHERYL ANN	
			ART UNIT	PAPER NUMBER

1771

DATE MAILED: 07/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/892,977	Applicant(s) SMITH ET AL.	
	Examiner Cheryl Juska	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 113-151 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 113-151 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

### ***Response to Amendment***

2. Applicant's amendment filed with the RCE on April 12, 2004, has been entered. Claims 1-112 have been cancelled and new claims 113-151 have been added.

3. The cancellation of claims 74-112 renders moot the rejections set forth in the Final Office Action of October 8, 2003.

4. Applicant's new claims differ from cancelled claims 71-122 in that the claims have been changed from a carpet comprising a primary backing and a primary backing for a carpet "that consists essentially of..." to a carpet and a primary backing "wherein said primary backing comprises a composite fibrous material, said composite fibrous material consisting of..."

Hence, the new claims do not render a rejection over the Leib reference (US 4,242,394) since Leib teaches a composite fibrous material consisting of a nonwoven capping layer, a reinforcing layer, and a woven backing layer. However, the following new rejections are set forth below.

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***Claim Rejections - 35 USC § 102/103***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 113-116 and 121-132 are rejected under 35 USC 102(b) as being anticipated by, or in the alternative, under 35 USC 103(a) as being unpatentable over US 5,380,574 issued to Katoh et al.

Applicant claims a primary backing for a carpet and a carpet comprising said primary backing, wherein said primary backing comprises a composite fibrous material, said composite fibrous material consisting of a woven fabric needlepunched to a bonded nonwoven fabric. Applicant also claims a dimensional stability of the primary backing. The nonwoven fabric has a basis weight of 0.25-5 osy, preferably 0.5-3 osy, and more preferably 0.75-3 osy. The woven fabric has a basis weight of 2-8 osy, preferably 3-5 osy. The weight ratio of the woven to nonwoven fabric ranges from 1-5. The woven fabric has 20-35 ends/in and 10-30 picks/in, comprises monofilament warps and fills of synthetic fibers, such as polypropylene, and is a plain weave. Fusing or mechanical interlocking, such as needlepunching, or combinations thereof bonds the nonwoven fabric. Said nonwoven fabric comprises polypropylene, nylon, polyester,

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polyethylene, or combinations thereof. Preferably, the nonwoven is made of continuous filaments, such as by a spunbond process. The carpet may further comprise a secondary backing.

Katoh discloses a double-sided carpet mat comprising a primary backing consisting of a base fabric and a nonwoven fabric, wherein said primary backing has yarn piles tufted therethrough (abstract). Specifically, the base fabric is preferably a plain weave fabric of polypropylene tape yarns, while the nonwoven fabric may be a needlepunched nonwoven having binder fibers or a spunbond nonwoven (col. 2, lines 46-53 and col. 2, line 67-col. 3, line 24). Suitable materials for said nonwoven include fibers such as polyethylene, polypropylene, polyamide, or polyester filaments (col. 2, lines 54-66). The base fabric and the nonwoven fabric are united by needlepunching (col. 3, lines 35-60). The basis weight of the nonwoven fabric preferably ranges from 30-300g/m<sup>2</sup> (about 0.9-9 osy) (col. 3, lines 8-10).

Thus, Katoh teaches the presently invention with the exception of the claimed dimensional stability. However, it is reasonable to presume that the Katoh invention inherently possesses said dimensional stability. Support for said presumption is found in the use of like materials (i.e., woven polypropylene monofilament tape yarn scrim and bonded polypropylene or polyester nonwoven) and the use of like processes (i.e., needlepunching said scrim and said nonwoven into a primary backing and then tufting said primary backing). The burden is upon applicant to prove otherwise. *In re Fitzgerald*, 205 USPQ 495. In the alternative, the claimed dimensional stability would obviously have been present once the Katoh invention is provided. Note *In re Best*, 195 USPQ 433, footnote 4 (CCPA 1977) as to the providing of this rejection under 35 USC 103 in addition to the rejection made above under 35 USC 102. Therefore, claims 113-116 and 121-132 are rejected as being anticipated by or obvious over the cited Katoh patent.

***Claim Rejections - 35 USC § 103***

8. Claims 117-120 and 133-151 are rejected under 35 USC 103(a) as being unpatentable over the cited Katoh patent in view of US 4,053,668 issued to Kimmel et al.

Katoh fails to explicitly teach a basis weight and fabric count of the woven backing fabric. However, Katoh does teach said woven fabric is a plain weave, polypropylene tape yarn fabric. Such fabrics are conventional materials in the art for primary backings. For example, Kimmel teaches one embodiment of a conventional primary backing comprising woven polypropylene ribbon filaments (i.e., tape yarns) has a basis weight of 3.3 osy and a fabric count of 30 x 11 (i.e., 30 ends/in by 11 picks/in) (col. 2, lines 31-45). Hence, it would have been obvious to one skilled in the art to employ a known construction (e.g., basis weight and fabric count) for the woven polypropylene primary backing of the Katoh invention. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. Therefore, claims 117, 118, 120, 133-144, 146, 147, and 149-151 are rejected as being obvious over the cited prior art.

With respect to claims 119, 145, and 148, it is asserted that the claimed weight ratio would also be obvious over the cited prior art. Specifically, when employing the nonwoven basis weight of Katoh with the woven basis weight of Kimmel, one would achieve a weight ratio within the range claimed. Thus, it would have been obvious to one skilled in the art to select the basis weights of the nonwoven and woven components and, hence, the weight ratio of the two, within the range presently claimed. The weights of each are well known in the art and selection of a particular weight ratio would be a matter of discovering an optimum value of a result effective variable. *In re Boesch*, 205 USPQ 215. In particular, the weight ratio would affect the

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overall carpet weight and the strength and dimensional stability of the composite primary backing. Therefore, claims 119, 145, and 148 are also rejected.

9. Claims 113-119 and 121-132 are rejected under 35 USC 103(a) as being unpatentable over US 4,140,071 issued to Gee in view of US 5,380,574 issued to Katoh et al.

Gee discloses a process for preparing a tufted carpet consisting of feeding simultaneously into a tufting machine (a) a woven or bonded nonwoven fabric of continuous polypropylene filaments and (b) a bonded nonwoven sheet of continuous filaments (abstract). Said sheets are fed into the tufting machine in surface contact with each other so that the tufts of yarn secure the two sheet together. The woven fabric may be a conventional woven primary backing (i.e., polypropylene ribbon filaments) having "an adequate number of warp ends and filling picks per cm to give good construction, i.e., construction adequate to prevent significant yarn slippage" (col. 2, lines 4-16). The woven polypropylene fabric has a basis weight of about 70-140 g/m<sup>2</sup> (about 2.1-4.2 osy) (col. 2, lines 19-21). The bonded nonwoven second sheet may be a spunbond nonwoven fabric (col. 2, lines 22-33) and preferably has a weight in the range of 13-30 g/m<sup>2</sup> (about 0.4-0.9 osy) (col. 2, lines 24-29). Hence, the weight ratio of woven to nonwoven fabrics ranges from about 2 to 10. Thus, Gee teaches a tufted primary backing comprising a dual layer primary backing consisting of a woven polypropylene tape yarn fabric and a spunbond nonwoven fabric.

Gee lacks a teaching that the two layers are attached together by needlepunching prior to tufting, as is presently claimed. However, it would have been obvious to one skilled in the art to needlepunch the two sheets together prior to feeding into a tufting machine in order to produce a preformed dual layer primary backing that does not require modification of a tufting process line.

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Specifically, conventional tufting process lines will have only one feed roll for the primary backing to be tufted, while the invention of Gee requires two feeder rolls. For example, Katoh teaches bonding together by needlepunching a woven primary backing and a spunbond nonwoven to produce a dual layer composite primary backing (abstract). Thus, it would be obvious to bond together the two layers of Gee prior to tufting in order to produce a dual layer primary backing without modification of a conventional tufting process line. Additionally, one might be motivated to produce the preformed dual layer primary backing in order to provide a product ready for use by a carpet manufacturer. Furthermore, it would have been obvious to needlepunch the two layers together before tufting in order to ease handling and processing of the primary backing and to increase the dimensional stability of said primary backing and, hence, the tufted carpet.

As such, it is argued that the claimed dimensional stability would have been present upon the combination of the cited prior art. Specifically, upon needlepunching the two layers of Gee as taught by Katoh, the claimed dimensional stability would have necessarily been present since the structure and the chemistry of the combination of art meets applicant's claimed structure and chemistry. Like articles cannot have mutually exclusive properties. Therefore, claims 113-119, 122-128, and 130-132 are rejected as being obvious over the cited prior art.

With respect to claim 121, Gee is silent regarding a secondary backing. However, it would have been obvious to one skilled in the art to employ a secondary backing as known in the art and taught by Katoh, in order to provide a finished product. Thus, claim 121 is rejected.

With respect to claim 129, Gee fails to teach polypropylene fibers for the nonwoven material. However, Katoh teaches polypropylene spunbond nonwovens. Hence, it would have



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been obvious to one skilled in the art to substitute polypropylene fibers for the polyester fibers of the Gee spunbond nonwoven since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. Thus, claim 129 is also rejected.

10. Claims 120 and 133-151 are rejected under 35 USC 103(a) as being unpatentable over the cited Gee patent in view of the cited Katoh patent and in further view of the cited Kimmel patent.

Gee and Katoh fail to explicitly teach a fabric count of the woven backing fabric. However, as noted above, Gee teaches the woven fabric must have “an adequate number of warp ends and filling picks per cm to give good construction.” Thus, one skilled in the art would look to conventional primary backing fabrics for instruction. Fabrics having the claimed fabric count are well known in the art. For example, Kimmel teaches one embodiment of a conventional primary backing comprising woven polypropylene ribbon filaments (i.e., tape yarns) has a basis weight of 3.3 osy and a fabric count of 30 x 11 (i.e., 30 ends/in by 11 picks/in) (col. 2, lines 31-45). Hence, it would have been obvious to one skilled in the art to employ a known construction for the woven polypropylene primary backing of the Gee invention. It has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. *In re Leshin*, 125 USPQ 416. Therefore, claims 120 and 133-151 are rejected as being obvious over the cited prior art.

### ***Conclusion***

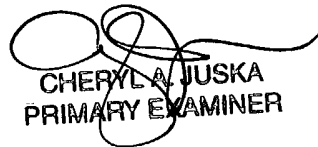
11. Any inquiry concerning this communication or earlier communications from the

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examiner should be directed to Cheryl Juska whose telephone number is 571-272-1477. The examiner can normally be reached on Monday-Friday 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached at 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
CHERYL A. JUSKA  
PRIMARY EXAMINER

cj  
July 26, 2004